SCINTILLATION-IMMUNE ADAPTIVE OPTICS RECONSTRUCTOR

ABSTRACT OF THE DISCLOSURE

A method and apparatus for producing a scintillation-immune adaptive optics reconstructor is disclosed. The present invention includes a wavefront sensor (70) which determines illumination slope and amplitude of a number of subapertures (75). The slope and amplitude information is coupled to a slope weighting function (90), which weights the slopes of each subaperture (75) according to the amplitude of illumination of each subaperture. The present invention determines the variation in light amplitude received by the subapertures (75) and determines a slope of the light amplitude variation. The signal gain of the imaging system is then adjusted depending on the slope of the light amplitude variation, thereby yielding a closed-loop system that compensates for amplitude disturbances caused by scintillations in the images received by the imaging system (10).

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